

# *Wireless VGA*

*Version 1.0*

*GrandTec USA  
2715 Electronic Lane  
Dallas, TX 75220  
[www.GrandTec.com](http://www.GrandTec.com)  
214-366-3496*

**USA Notification**

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

**Canadian Notification**

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Réglement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada.

**Safety and EMC Standards**

FCC class A, UL, cUL

## **Introduction**

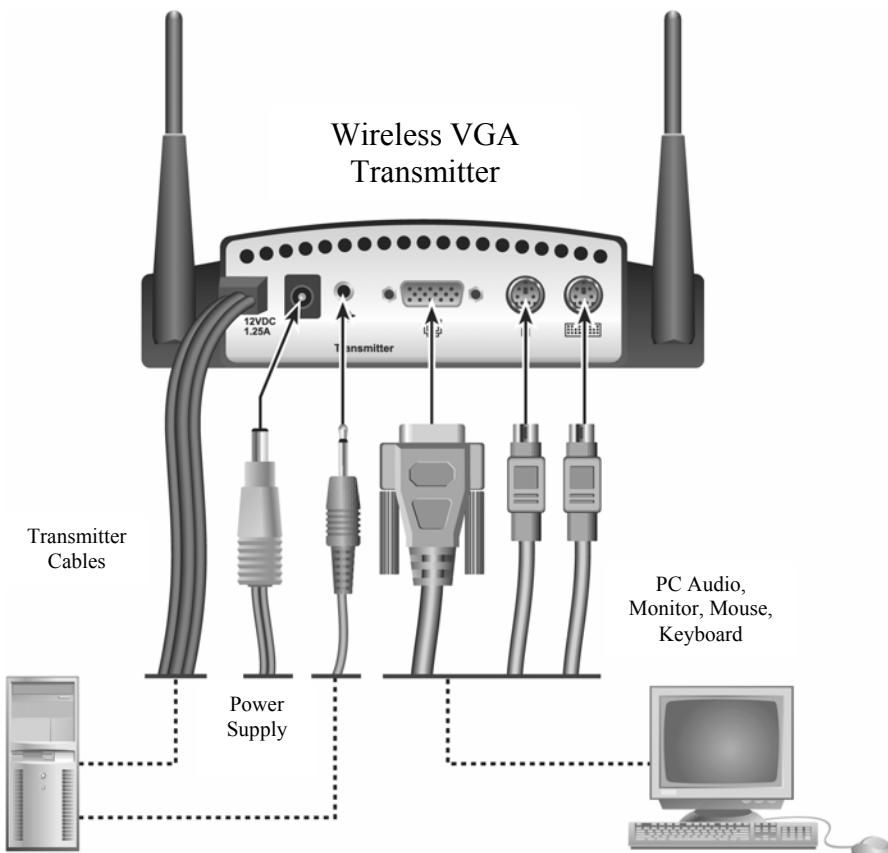
Congratulations! You have discovered the world's first wireless VGA system. Connect a monitor, keyboard, mouse and speakers to your computer from up to 100 feet away.

## **Package Contents**

Wireless VGA Transmitter  
Wireless VGA Receiver  
Two Power Supplies  
PC Audio Cable  
User's Guide

## **Installation: Transmitter**

1. Power down your computer.
2. Unplug the keyboard, mouse, monitor and PC speakers (if applicable) from your computer.
3. Connect the Wireless VGA transmitter cables into your computer: PS/2 keyboard (purple), PS/2 Mouse (green) and VGA monitor (blue).
4. Using the included PC audio cable (with green connectors), connect one end into the audio input jack on the Wireless VGA transmitter and the other end into the speaker output on your PC soundcard.
5. Connect your keyboard, mouse and monitor into the corresponding ports on the Wireless VGA transmitter.



6. Plug in the Wireless VGA transmitter.

**NOTE: The Wireless VGA transmitter MUST be powered on BEFORE the computer.**

7. Turn on the computer.
8. Set the computer's display properties to one of the following: 640x480 at 60 Hz, 800x600 at 60 Hz or 1024x768 at 60 Hz. Set the color resolution to at least 24 bit for best performance.

The following procedure is required on most typical systems (Note: your PC may require a different procedure. Please refer to your PCs documentation for how to adjust the refresh rate for further information):

Start Menu -> Settings -> Control Panel  
Click on the icon "DISPLAY".  
Click on SETTINGS tab.  
Click on the button "ADVANCED".  
Click on ADAPTER tab.  
Click on LIST ALL MODES.  
Select one of the following modes: 640x480 at 60 Hz, 800x600 at 60 Hz or 1024x768 at 60 Hz.

**NOTE: The Wireless VGA System supports 2-button mouse functionality only. Any additional functions supported by your mouse will not function with the Wireless VGA System.**

**Laptop Users:** The installation is the same except that you do not need to connect an external monitor and you may not be able to use the keyboard and mouse without an additional Y-adapter. You also must enable the external display.

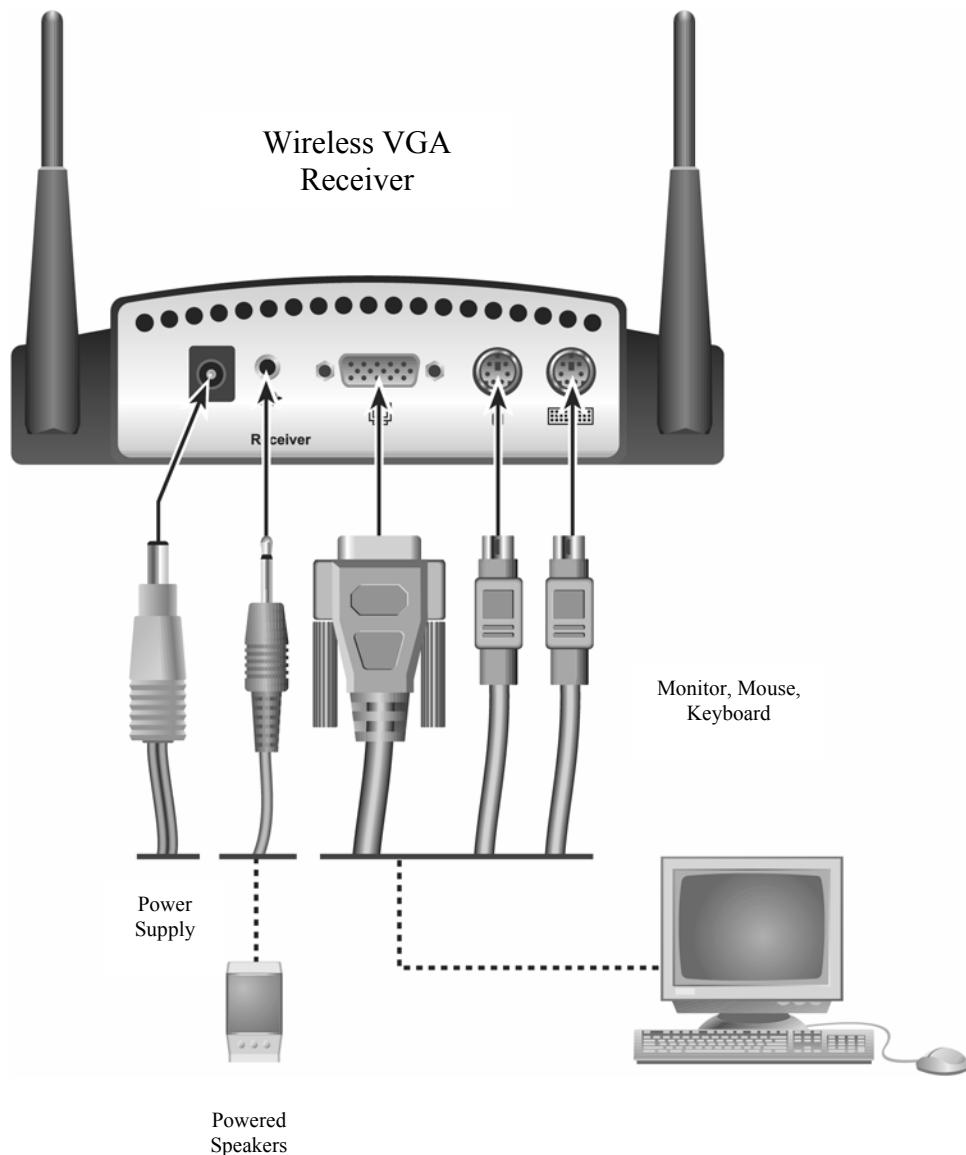
1. You must configure the laptop computer to display an external VGA signal. Typically, this is done by toggling the "Fn" key + "F1", "F2", etc. The actual function key varies with each computer. Please refer to your computer's User's Manual for specific instructions for displaying an external VGA signal.

The "Fn" + "Fx" toggles between three settings. By default, the LCD panel is on. The first toggle attempts to power both the LCD panel and the external signal. In some cases, laptops do not have enough power to the LCD and an external signal, so only a scrambled signal is viewable on the Wireless VGA display. The third toggle turns off the LCD panel and shows only the Wireless VGA display.

## **Installation: Receiver**

The Wireless VGA receiver can be connected to virtually any industry standard VGA display, from PC monitors to projectors and plasma displays, that supports one of the following: 640x480 at 60 Hz, 800x600 at 60 Hz or 1024x768 at 60 Hz.

1. Connect the Wireless VGA receiver to the VGA display using a standard VGA cable.  
For best performance, cable should not exceed 3 meters in length.
2. Connect a PS/2 keyboard, PS/2 mouse and powered speakers to the corresponding inputs on the Wireless VGA receiver (optional)



3. Plug in the Wireless VGA receiver.
4. Turn on the VGA display and toggle the input to display the Wireless VGA receiver.

## **Operations**

The Wireless VGA transmitter and receiver units have been configured to operate as a companion pair. The initial radio link between the two units is established by the receiver, although all other aspects of the transmission are controlled by the transmitter.

### **To make the connection:**

1. Complete the installation instructions for the transmitter and receiver earlier in this guide.
2. Power up the Wireless VGA transmitter and wait for the middle LED, labeled S2, to light.
3. Power up the VGA display connected to the receiver.
4. Power up the Wireless VGA receiver.
5. Power up the computer.

Once powered, the receiver searches for and connects to the transmitter. Once the connection is completed, the wireless computer screen will display. When the connection is completed, all three LEDs (S1, S2, PWR) will light.

### **To Fine-Tune the Display:**

Fine-tuning will only be necessary the first time the Wireless VGA system is connecting to a display. Once adjusted, the settings are saved in the Wireless VGA transmitter.

#### *To fine-tune automatically:*

1. With the keyboard: Turn on the On-Screen Display (OSD) on the receiver unit by pressing and holding the left SHIFT key followed by the right SHIFT and then releasing both.
2. With the mouse: Right-click twice and left-click once in rapid succession.
3. Select *Auto Setup – Run*
4. Select *Finish* to save the changes.

#### *To fine-tune manually:*

1. With the keyboard: Turn on the On-Screen Display (OSD) on the receiver unit by pressing and holding the left SHIFT key followed by the right SHIFT and then releasing both.
2. With the mouse: Right-click twice and left-click once in rapid succession.
3. Select *Advanced*.
4. Press the LEFT and RIGHT arrow keys to make adjustments for:
  - a. Horizontal Position
  - b. Vertical Position
  - c. Brightness
  - d. Contrast
  - e. Clock Phase
5. Select *Finish* to save the changes.

## **Issues and Solutions**

---

### **No power status light on transmitter or receiver**

Verify that the green LED on the separate supplied power supply is illuminated, indicating that the power supply is plugged in correctly.

---

Ensure that the power cable from the supplied power supply is securely plugged into the Wireless VGA transmitter or Wireless VGA receiver unit.

---

### **No video on monitor attached to transmitter**

Verify that the monitor has power.

---

Ensure that the video cable from the Wireless VGA transmitter is securely plugged in to the correct connector on the computer.

---

Ensure that the video cable from the monitor is securely plugged in to the correct connector on the Wireless VGA transmitter.

---

Verify that the computer is powered.

---

As a last check, plug the video cable from the monitor directly into the computer to verify that the monitor is working and that the computer is generating active video. If this is functioning, check that the display settings for your computer are set no higher than a resolution of 1024 x 768 at 60 Hz refresh rate.

---

### **No mouse and/or keyboard operation from peripherals attached to transmitter**

Verify that the mouse and keyboard are connected to the correct PS/2 ports on the computer. Match the connector color codes (green is mouse and purple is keyboard).

---

If the Wireless VGA transmitter was powered up after the computer, turn off the computer and transmitter. Power up the Wireless VGA transmitter unit, wait for the middle LED to illuminate, then power up the computer.

---

Retest the mouse and keyboard by connecting them directly to the computer and rebooting the computer. If one does not function correctly, replace the nonfunctioning peripheral.

---

### **No video on monitor attached to receiver**

Verify that the monitor attached to the Wireless VGA receiver has power.

---

Ensure that the video cable from the monitor is securely plugged in to the correct connector on the Wireless VGA receiver.

---

Ensure that the video cable from the Wireless VGA transmitter is securely plugged in to the correct connector on

---

the computer.

---

Verify that the computer is powered.

---

Cycle power to the Wireless VGA receiver. An informational message should appear on the monitor for a brief moment. If the message does not appear, check the monitor by plugging the video cable from the monitor directly into the computer to verify that the monitor is working and that the computer is generating active video. If this is functioning, check that the display settings for your computer are set no higher than a resolution of 1024 x 768 at 60 Hz refresh rate. If the monitor does not function correctly, replace it.

---

Verify that all three LEDs on both the Wireless VGA transmitter and the Wireless VGA receiver are illuminated a short period of time after power up (30 seconds or less). If all three LEDs are not illuminated, move the Wireless VGA receiver closer to the Wireless VGA transmitter unit until all LEDs are illuminated.

---

As a last check, plug the video cable from the monitor directly into the computer to verify that the monitor is working and that the computer is generating active video. If this is functioning, check that the display settings for your computer are set no higher than a resolution of 1024 x 768 at 60 Hz refresh rate. If the monitor does not function correctly, replace it.

---

#### **No mouse and/or keyboard operation from peripherals attached to receiver**

---

Ensure that the mouse and keyboard operation cables are connected to the correct PS/2 ports on the Wireless VGA receiver. Match the connector color codes (green is mouse and purple is keyboard).

---

Ensure that the mouse and keyboard cables from the Wireless VGA transmitter are connected to the correct PS/2 ports on the computer. Match the connector color codes (green is mouse and purple is keyboard).

---

Verify that all three LEDs on both the Wireless VGA transmitter and the Wireless VGA receiver are illuminated a short period of time after power up (30 seconds or less). If all three LEDs are not illuminated, move the Wireless VGA receiver closer to the Wireless VGA transmitter unit until all LEDs are illuminated.

---

Retest the mouse and keyboard by connecting them directly to the computer and rebooting the computer. If one does not function correctly, replace the nonfunctioning peripheral.

---

#### **No audio from speakers attached to receiver**

---

Ensure that the audio cable is securely plugged into the line

---

---

in port of the Wireless VGA transmitter unit.

---

Ensure that the audio cable is securely plugged into the line out port of the computer (should be color-coded green).

---

Ensure that the speaker cable is securely plugged into the line out port of the Wireless VGA receiver unit.

---

Verify that all three LEDs on both the Wireless VGA transmitter and the Wireless VGA receiver are illuminated a short period of time after the power up (30 seconds or less). If all three LEDs are not illuminated, move the Wireless VGA receiver closer to the Wireless VGA transmitter unit until all LEDs are illuminated.

---

Retest the speakers by connecting them directly to the computer. If they do not function correctly, replace them.

---

#### **Poor video quality on monitor attached to receiver**

---

Run Auto Setup from the OSD. Remember to click Finish to save new settings.

---

Ensure that the video cable from the monitor is securely plugged in to the correct connector on the Wireless VGA receiver.

---

Ensure that the video cable from the Wireless VGA transmitter is securely plugged in to the correct connector on the computer.

---

#### **Slow response from peripherals attached to Wireless VGA receiver**

---

Run Auto Setup from the OSD. Click Finish to save.

---

## ***Specifications***

---

### **Wireless VGA System Product Specifications**

---

#### **Agency Approvals**

---

FCC Class A, UL, cUL

---

#### **Mechanical**

---

Height: 1.75 " (4.45 cm)

---

Width: 6.25" (15.88 cm)

---

Depth: 5.25" (13.34 cm)

---

Weight: 1 lb (0.45 kg)

---

#### **Environmental/Power**

---

Power supply: 12 VDC @ 1A

---

Operating temperature: 0°C - 40°C

---

Storage temperature: -20°C - 50°C

---

#### **Multimedia**

---

Video Performance: 640 x 480, 800 x 600,  
1024 x 768

---

Video Compatibility: VGA, SVGA, XGA

---

VGA compatible with analog RGB (15-Pin D-shell), non-interlaced at 60 Hz refresh rate

---

Audio Support: Analog radio

---

#### **Supported Hardware**

---

Computer: PC-based

---

Video Resolution: VGA, SVGA, XGA

---

Peripherals: PS/2 keyboard, PS/2 mouse, speakers

---

---

#### **Radio**

---

Radio Protocol: IEEE 802.11a

---

Radio Frequency: 5150-5250; 5250-5350; 5725-5825 MHz

---

Radio Modulation: OFDM (Orthogonal Frequency Division Multiplexing)

---

Nominal Output Power: 17 dBm

---

Range: XGA video resolution to 100 feet

---

Security: AES encryption with 802.1x authentication

---

**For additional technical support:**

On-Line – [www.Grandtec.com](http://www.Grandtec.com)

Email – [grand@grandtecusa.com](mailto:grand@grandtecusa.com)

Fax – 214-351-3862

Call – 214-956-0447

Telephone support is available M-F, 9:00 – 5:30 CST. Voice-mail is available during off hours or during busy peak times. Your call will be returned as soon as possible (usually within 24 hours).

A Return Authorization Number (RA#) is required before returning any products to the manufacturer for repair. No credits will be given at any time by the manufacturer. If you desire a credit for the return of your product, please contact the retailer from whom you originally purchased the product. Credits are subject to the policies of the individual retailer.

**Warranty**

We warrant the Wireless VGA System shall, for a period of one year from the date of purchase, be free of any defect in material and workmanship and that it will perform in accordance with specifications. The sole obligation of this warranty shall be to either repair or replace at our expense the product, at manufacturer's option. The original sales receipt must be supplied for warranty repair.

There are no warranties except as stated. There are no warranties expressed or implied, including, but not limited to, the implied warranties of merchantability and of fitness for a particular purpose. In no event shall we be liable for consequential, incidental, or special damages, including, but not limited to, damages or loss of data, profits or goodwill.

Products that have been subject to abuse, misuse, vandalism, accident, alteration, neglect, unauthorized repair or improper installation will not be covered by warranty.